

# **EXHIBIT A**

**Exhibit A – Proposed Constructions for Terms in Dispute**

<b>Term</b>	<b>Asserted Claims</b>	<b>Claim Term or Phrase</b>	<b>Corephotonics' Proposed Constructions and Citations to Evidence</b>	<b>Apple Proposed Constructions and Citations to Evidence</b>
1	'291 patent, cls. 1, 2, 4, 5, 10, 12, 13	Wide	<p>“Wide” refers to one of a pair of imaging sections with a wider field of view</p> <p><b><u>Intrinsic Evidence</u></b> '291, at cls. 1, 2, 4, 5, 10, 12, 13; 2:1-28, 4:24-51, 5:14-34, 12:14-29.</p> <p><b><u>Extrinsic Evidence</u></b> The testimony of one or more experts, including Dr. Eli Saber and Dr. John Hart, who may testify as to the meaning of this term to a person of ordinary skill in the art at the time of the invention in view of the intrinsic and extrinsic evidence.</p>	<p>No construction necessary. If the Court determines that construction is necessary, Apple would propose that “Wide” means “wide-angle,” or, alternatively, “wide-angle, characterized by an effective focal length (EFL) shorter than normal and field of view (FOV) wider than normal.”</p> <p><b><u>Intrinsic Evidence</u></b> '291, col. 2:1-14</p> <p>See evidence for “Tele”</p> <p><b><u>Extrinsic Evidence</u></b> Expert opinion testimony regarding how a person of ordinary skill in the art would have understood the claim language in context.</p> <p>See evidence for “Tele”</p>
2	'291 patent, cls. 1, 2, 4, 5, 10, 12, 13	Tele	<p>“Tele” refers to one of a pair of imaging sections with a narrower field of view</p> <p><b><u>Intrinsic Evidence</u></b></p>	<p>telephoto, characterized by a TTL/EFL ratio less than 1. Alternatively, in the event the Court does not adopt that construction, Apple would propose that “Tele”</p>

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			<p>'291, at cls. 1, 2, 4, 5, 10, 12, 13; 2:1-28, 4:24-51, 5:14-34, 12:14-29</p> <p><b><u>Extrinsic Evidence</u></b>  Jan. 21, 2021 Deposition of Dr. Fredo Durand, at 62:2-15  Fredo Durand, "Photography 101" (2011).</p> <p>Warren J. Smith, Modern Lens Design (1992), at Ch. 10.</p> <p>The testimony of one or more experts, including Dr. Eli Saber and Dr. John Hart, who may testify as to the meaning of this term to a person of ordinary skill in the art at the time of the invention in view of the intrinsic and extrinsic evidence.</p>	<p>means "telephoto, characterized by an effective focal length (EFL) longer than normal and field of view (FOV) narrower than normal."</p> <p><b><u>Intrinsic Evidence</u></b>  '291, col. 2:1-13, 6:2-7, 12:13-28.</p> <p>IPR2018-01348, Patent Owner's Preliminary Response, at 1, 4-5, 8, 24-25</p> <p>IPR2018-01348, Institution Decision, at 3, 8</p> <p>IPR2020-00860, Final Written Decision, at 66-70.</p> <p>IPR2020-00860, Ex. 1023 (Smith), at 169.</p> <p>IPR2020-00860, Ex. 2016 (Kingslake), at 8-9.</p> <p><b><u>Extrinsic Evidence</u></b>  Warren J. Smith, Modern Lens Design: A Resource Manual (1992) at 169.</p>

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				<p>Kingslake, <i>Optics in Photography</i> (1992), at 1-9, 49-50, 148.</p> <p>Malacara, <i>Handbook of Lens Design</i> (2004), at 12.2.2.</p> <p>Gregory H. Smith, <i>Camera Lenses: From Box Camera to Digital</i> (2006), at 59-60, 163</p> <p>U.S. Patent No. 10,288,840, e.g., col. 3:7-33</p> <p>Expert opinion testimony regarding how a person of ordinary skill in the art would have understood the claim language in context.</p>
3	'291 patent, cls. 1, 12, 13	fused/fusion	Corephotonics proposes that these terms be construed in their full context. See Terms #4 & #5.	<p>“fused”: formed into a composite that includes pixels from the Wide and Tele images.</p> <p>“fusion”: forming a composite that includes pixels from the Wide and Tele images.</p> <p><b><u>Intrinsic Evidence</u></b>  '291, col. 2:11-16, 2:53-56, 2:57-3:6, 3:35-41, 3:51-60, 4:60-5:13,</p>

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				<p>6:9-10, 9:15-36, 9:44-10:10, Figures 2-5, claims 1, 5, 12, 14</p> <p>IPR2020-00905, Patent Owner's Preliminary Response, at 6-9</p> <p>IPR2020-00905, Patent Owner's Response, at 14-31</p> <p>U.S. Pub. App. 2008/0030592 at Abstract, [0014]-[0015], [0026], [0029], [0035]-[0036], [0043]-[0047], [0062]-[0063], [0069]-[0070], Figures 5 and 6</p> <p>U.S. Pub. App. 2011/0064327 at [0053]-[0054], [0057]-[0058]</p> <p>See also evidence for Term #4</p> <p><b><u>Extrinsic Evidence</u></b></p> <p>Expert testimony regarding how a person of ordinary skill in the art would have understood the claim language in context.</p>
4	'291 patent, cls. 1, 12, 13	fused output image / without fusion ... output images	"fused output image" means "output image including a	"fused output image": a composite output image that includes pixels from the Wide and Tele images.

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			<p>combination of image information from two images”</p> <p>“without fusion ... output images” means “output images not created by combining image information from two images”</p> <p><b><u>Intrinsic Evidence</u></b>  ‘291, at 3:34-41, 3:48-60, 4:60-5:13, 9:15-36, Fig. 2 and accompanying discussion in the specification.</p> <p><b><u>Extrinsic Evidence</u></b>  The testimony of one or more experts, including Dr. Eli Saber and Dr. John Hart, who may testify as to the meaning of this term to a person of ordinary skill in the art at the time of the invention in view of the intrinsic and extrinsic evidence.</p>	<p>“without fusion ... output images”: output images that do not include a composite image that includes pixels from the Wide and Tele images.</p> <p><b><u>Intrinsic Evidence</u></b>  ‘291, col. 2:11-16, 2:53-56, 2:57-3:6, 3:35-41, 3:51-60, 4:60-5:13, 6:9-10, 9:15-36, 9:44-10:10, Figures 2-5, claims 1, 5, 12, 14</p> <p>IPR2020-00905, Patent Owner’s Preliminary Response, at 6-9 including portions of U.S. Patent No. 7,859,588 cited therein</p> <p>IPR2020-00905, Patent Owner’s Response, at 14-31 including portions of U.S. Patent No. 7,859,588 cited therein</p> <p>U.S. Pub. App. 2008/0030592 at Abstract, [0014]-[0015], [0026], [0029], [0035]-[0036], [0043]-[0047], [0062]-[0063], [0069]-[0070], Figures 5 and 6</p> <p>U.S. Pub. App. 2011/0064327 at [0053]-[0054], [0057]-[0058]</p>

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				<p>IPR2018-01348, Patent Owner's Preliminary Response, at 4-5, 6-7</p> <p>U.S. Pub. App. 2008/0030592 at Abstract, [0014]-[0015], [0026], [0029], [0035]-[0038], [0043]-[0047], [0060]-[0063], [0069]-[0070], Figures 5 and 6</p> <p>U.S. Pub. App. 2011/0064327 at [0053]-[0054], [0057]-[0058]</p> <p>U.S. Patent No. 7,859,588, at col. 7:54-8:19, 10:15-17, 12:42-43, 12:66-67, 14:1-5, 19:49-20:15, 20:59-59, 21:7-44, 22:14-42, 24:52-25:15, 28:45-57, Figs. 3, 8, 11, 14, 26</p> <p><b><u>Extrinsic Evidence</u></b></p> <p>Expert testimony regarding how a person of ordinary skill in the art would have understood the claim language in context.</p>
5	'291 patent, cls. 1, 12	fused output image of the object or scene from a particular point of view	"output image of the object or scene from a particular point of view" means that "the object and scenes of the output image have the position	"a fused output image of an object or scene from a particular point of view" means an output image of an object or scene that is always a

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			<p>and shape as would be seen from a defined point of view of one of the Wide or Tele lens”</p> <p>“a fused output image of an object or scene from a particular point of view” means “a composite / output image that if from the Wide POV combines Wide image data with image data from the overlap region of the Tele image, and if from the Tele POV, combines Tele image data with image data from the overlap region of the Wide image”</p> <p><b><u>Intrinsic Evidence</u></b>  ‘291, at 3:34-41, 3:48-60, 4:60-5:13, 9:15-36, Fig. 2 and accompanying discussion in the specification.</p> <p><b><u>Extrinsic Evidence</u></b>  U.S. Pat. 10,746,963, at 2:9- 14, 3:1-18.</p> <p>The testimony of one or more experts, including Dr. Eli Saber and Dr. John Hart, who may testify as to the meaning of this term to a person of ordinary skill in the art at the time</p>	<p>composite of both Wide and Tele image pixels, whether from the Wide or Tele point of view.</p> <p>“output image of the object or scene from a particular point of view” – no separate construction is necessary. If the Court determines that construction is necessary, “output image of the object or scene from a particular point of view” means an output image of the object or scene from the Wide or Tele point of view.</p> <p><b><u>Intrinsic Evidence</u></b>  ‘291, col. 2:11-16, 2:53-56, 3:35-41, 3:51-60, 4:60-5:13, 9:15-36, 9:44-10:10; Figures 2-5.</p> <p>IPR2020-00905, Patent Owner’s Preliminary Response, at 6-9</p> <p>IPR2020-00905, Patent Owner’s Response, at 14-31</p> <p>See also evidence for “fused”</p> <p><b><u>Extrinsic Evidence</u></b>  ‘152 Pat., Abstract, 6:20-26, 9:22-30; Claims 1-4.</p>



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			of the invention in view of the intrinsic and extrinsic evidence.	'152 pat. 5/17/2016 Office Action, Response to 5/17/2016 Office Action, 11/10/2016 Examiner-Initiated Interview Summary, Notice of Allowance.  See also evidence for “fused”
6	'291 patent, cls. 1, 2, 12	image data	<p>plain and ordinary meaning, or, in the alternative if the Court determines a construction is necessary, “data output from an imaging section”</p> <p><b><u>Intrinsic Evidence</u></b> '291, at Abstract, 1:49-67, 2:57-3:6, 4:24-51, 5:14-34, 9:15-36, 11:41-12:2.</p> <p>US 2011/0064327, at [0009], [0011].</p> <p><b><u>Extrinsic Evidence</u></b> The testimony of one or more experts, including Dr. Eli Saber and Dr. John Hart, who may testify as to the meaning of this term to a person of ordinary skill in the art at the time of the invention in view of the intrinsic and extrinsic evidence.</p>	<p>data that represents image pixels.</p> <p><b><u>Intrinsic Evidence</u></b> See evidence for “fused”</p> <p>See also '291, col. 1:58-66.</p> <p><b><u>Extrinsic Evidence</u></b> See evidence for “fused”</p>

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7	'712 patent, 1, 12, 13, 15, 16, 19	lens assembly	<p>Plain and ordinary meaning, or, in the alternative if the Court determines that a construction is necessary, “arrangement of optical lens elements”</p> <p><b><u>Intrinsic Evidence</u></b>  '712, at Abstract, 1:49-67, 2:1-3:6, 2:21-30, 6:2-8, 12:13-38, Figs. 8, 9 and accompanying discussion in the specification; claim 1.</p> <p><b><u>Extrinsic Evidence</u></b>  The testimony of one or more experts, including Dr. Eli Saber and Dr. John Hart, who may testify as to the meaning of this term to a person of ordinary skill in the art at the time of the invention in view of the intrinsic and extrinsic evidence.</p>	<p>a five lens element optical lens assembly. Alternatively, “lens assembly” means “a self-contained operational unit of five optical lens elements,” or alternatively “a lens limited to five elements.”</p> <p><b><u>Intrinsic Evidence</u></b>  '712, Abstract, col. 1:25-41, 1:42-2:29, Figures 1A, 2A, 3A and associated text.</p> <p><b><u>Extrinsic Evidence</u></b>  To the extent Corephotonics submits expert testimony on this term, Apple reserves the right to respond with expert testimony regarding how a person of ordinary skill in the art would have understood the claim language in context.</p>